

## **Historic, archived document**

Do not assume content reflects current scientific knowledge, policies, or practices.



1.972  
A2042

UNITED STATES  
DEPARTMENT OF AGRICULTURE  
LIBRARY



BOOK NUMBER 1.972  
A2042  
1.97359

CHEMICAL COMPOSITION OF HEN'S EGG  
(Based on published analyses of fresh eggs,  
wet weight unless otherwise specified)

Compiled by E.H.McNally and C.A.Denton,  
Bureau of Animal Industry,  
U.S.D.A., Beltsville, Md.

ITEM	WHITE	YOLK	SHELL AND MEMBRANE
	(57.7% total wt.)	(31.6% total wt.)	(10.7% total wt.)
	Percent	Percent	Percent
Water	86.6	49.0	1.46
Organic material:	-----	-----	4.2
Proteins:			
Ovaglobulin	6.7	-----	-----
Ovamucin	1.9	-----	-----
Ovalbumin	69.7	-----	-----
Conalbumin	9.0	-----	-----
Ovamucoid	12.7	-----	-----
Vitelline	-----	78.4	-----
Livetin	-----	21.6	-----
Total protein	100.0%	11.6	16.7
Lipids:			
Neutral fats	-----	51.2*	-----
Lecithin	-----	34.2*	-----
Cephalin	-----	8.9*	-----
Sphingomylin	-----	**	-----
Cholesterol	-----	5.7*	-----
Total lipids	0.2	100.0%	31.6
Fat acid of lipids			
Myristic	-----	0.4*	-----
Palmitic	-----	27.9*	-----
Stearic	-----	6.1*	-----
Palmitoleic	-----	2.0*	-----
Oleic	-----	48.5*	-----
Linoleic	-----	8.4*	-----
Clupanodonic	-----	6.7*	-----
Total fat acids	-----	100.0%	-----
Free carbohydrate as glucose	0.4	0.21	-----
Other nitrogen-free organics	0.4	0.99	-----

(Continued on page 2)

\*Quantities have been shown to be affected by nutrition of the hen.

\*\*Present but not quantitatively determined.

ITEM	WHITE	YOLK	SHELL AND MEMBRANE
	Per 100 grams	Per 100 grams	
Organic material (continued):			
vitamins:			
A	0	4200* I.U.	-----
B <sub>1</sub> (Thiamine)	0	75* I.U.	-----
D	0	45* I.U.	-----
E (Alpha tocopherol)	0	45* gamma	-----
G (Riboflavin)	240*	510* gamma	-----
K	?	**	-----
Pantothenic acid	**	7000* gamma	-----
	Percent	Percent	Percent
Pigments:			
Carpxanthin	-----	*	-----
Cryptoxanthin	-----	*	-----
Oophorphyrin	-----	-----	**
Riboflavin	*	*	-----
Xanthophyll	-----	*	-----
Zeoxanthin	-----	*	-----
Inorganic material:			
Aluminum	***	0.0003	***
Arsenic	***	-----	***
Barium	***	***	***
Boron	0.0014*	-----	0.0008?
Calcium	0.014	0.131	37.8
Chlorine	0.169	0.178	-----
Chromium	***	***	***
Copper	***	0.000041*	***
Fluorine	***	0.00009	***
Iodine	***	*	-----
Iron	0.0011*	0.0087*	***
Lead	***	0.00006	***
Magnesium	0.011	0.017	0.4
Manganese	***	0.00105	-----
Molybdenum	***	***	***
Phosphorus	0.015*	0.607*	0.2
Potassium	0.152	0.115	-----
Rubidium	***	***	-----
Selenium	*	-----	*
Silicon	0.00002	0.00003	***
Silver	-----	***	***
Sodium	0.163	0.049	-----
Strontium	***	***	***
Sulphur	0.202	0.215	-----
Titanium	***	***	***
Vanadium	***	***	***
Zinc	***	0.0005	-----
Carbonate	-----	-----	55.9
Ash****	0.8	1.5	-----
Total	100.0	100.0	100.0

\*Quantities have been shown to be affected by nutrition of the hen.

\*\*Present but not quantitatively determined.

\*\*\*Traces only.

\*\*\*\*Ash includes only portion of oxidized inorganic material, remainder being volatile.



